

## DRILLING TO UNLOCK COBALT POTENTIAL AT THE GOLDEN RIDGE PROJECT IS UNDERWAY

**Perth, Western Australia, 21 November 2017:** Pioneer Resources Limited ("Pioneer" or the "Company" (ASX: PIO)) is pleased to announce that reverse circulation (RC) drilling has commenced at its 100%-owned Golden Ridge Cobalt Project, located on the Blair Dome in Western Australia's Eastern Goldfields.

- approximately 30 RC holes for 2,000m to be drilled, however additional holes can be drilled should field observations be positive; and
- samples will be used for bench-scale test work which will focus on the hydrometallurgical extraction of cobalt.

### OUTLOOK

The drilling programme will take approximately two weeks to complete and assays are expected to be to hand by the end of January, 2018. Pioneer will keep the market updated as results come to hand.

Composite samples of cobalt mineralisation will be used for first pass extraction test work. There are a number of alternative metallurgical processes being developed to treat cobalt and nickel laterite ores.

### Confirming Targets developed through RAB and Aircore Drilling

On 13 April 2017 the Company provided a summary of cobalt results from drill holes completed since 1978, including the GRB-series RAB holes and GRA-series aircore holes drilled by Pioneer between 2004 and 2015 (refer also to Figure 2). RC drilling is used to further test the resulting targets which included:

#### The Rocket Prospect

- BLD053: (diamond core) 12m at 0.266% Co from 106m
- GRAC949: (aircore) 14m at 0.211% Co from 43m
- GRAC906: (aircore) 10m at 0.257% Co from 34m

#### • Anomaly 14 Prospect

- GOR0388: (RAB) 12m at 0.139% Co from 36m
- GOR0404: (RAB) 30m at 0.147% Co from 36m (to EOH)
- GOR0409: (RAB) 6m at 0.275% Co from 18m
- GOR0413: (RAB) 6m at 0.308% Co from 18m (to EOH)
- GOR0418: (RAB) 18m at 0.191% Co from 42m (to EOH)

#### • Leo's Dam Trend

- GOR1107: (RAB) 8m at 0.198% Co ppm from 48m
- GRA0233: (aircore) 10m at 0.153% Co from 38m

## BACKGROUND TO COBALT PROSPECTIVITY AT GOLDEN RIDGE COBALT PROJECT

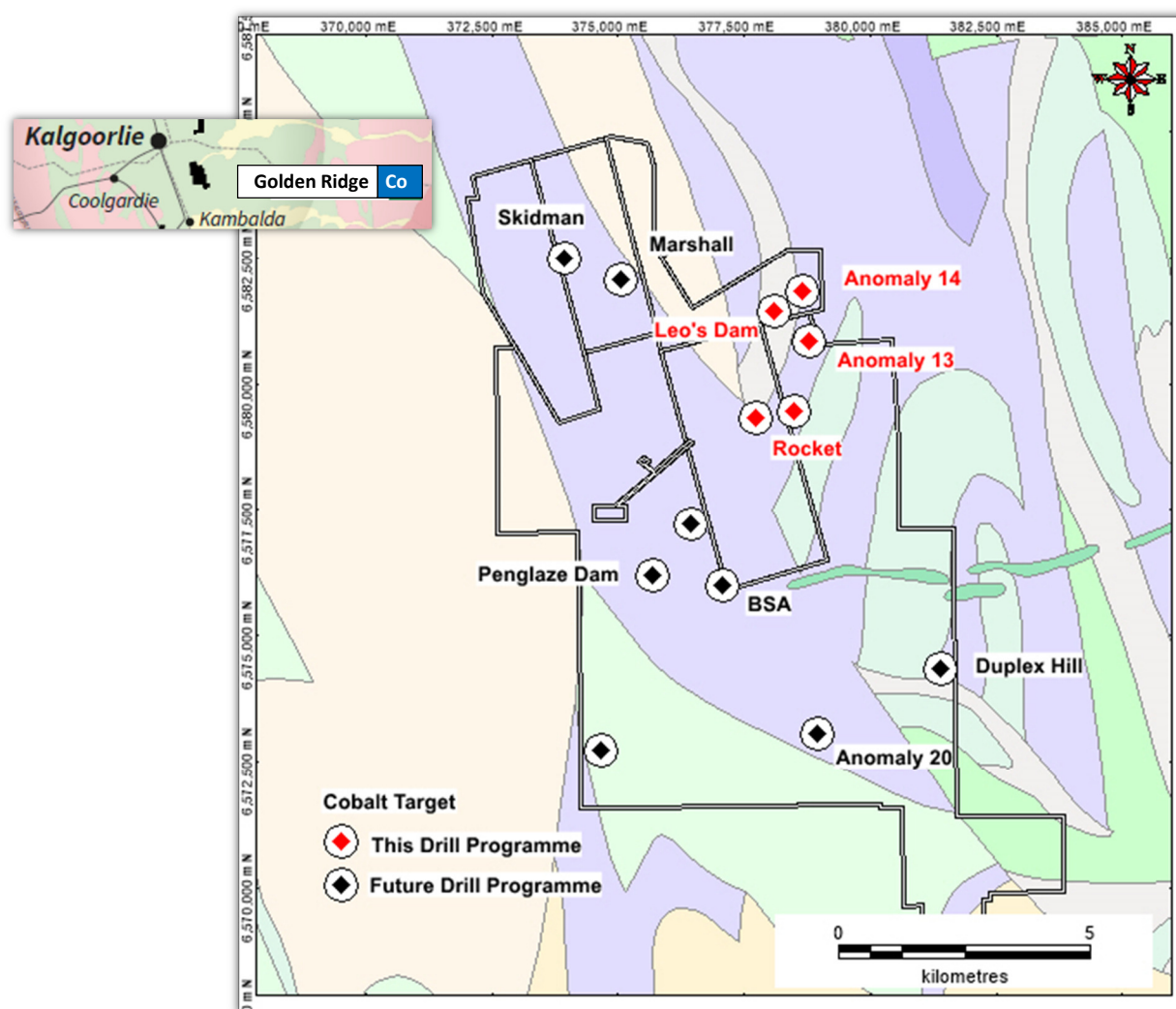
The Golden Ridge Project, located 30 kilometres south east of Kalgoorlie, covers an area of 115 km<sup>2</sup> of the Blair Dome. The Project includes substantial areas prospective for lateritic cobalt and nickel, plus the suspended Blair Nickel Sulphide Mine. The Blair Mine closed in 2008 during a time of depressed nickel prices, having produced 1.26mt of nickel ore at 2.62% Ni.

A significant number of exploration holes drilled during the search for nickel sulphides were assayed for a range of elements, including cobalt, in addition to nickel.

A detailed review of the Golden Ridge drilling database specifically looking for cobalt mineralisation within the Project has identified multiple, broad, high grade zones of high grade cobalt mineralisation.

To date, the study has identified 11 separate prospects with significant cobalt deposited in the weathered rock mantle (lateritic cobalt). The tenor of cobalt values are at least the equivalent of other cobalt-laterites in the Kalgoorlie mineral district.

The 'reconnaissance' drilling completed between 1978 and 2015 demonstrates the presence of widespread cobalt mineralisation, and each target has significant exploration upside to identify extensions to the indicated mineralisation deposits as cobalt-specific drilling proceeds.



**Figure 1:** Golden Ridge Project Tenements and Prospect Map. The Project is located 30km southeast of Kalgoorlie, W.A. The prospects in red will be drilled this programme.

## ABOUT COBALT

As a commodity, cobalt is experiencing expanding demand in response to its increasing use as a component of cathodes in certain lithium batteries as they become increasingly used in electric vehicles and electricity stabilisation systems (powerwalls).

Today over 45% of all cobalt produced is used in the manufacture of rechargeable batteries.

Other uses for cobalt include in the manufacture of super-alloys, including jet engine turbine blades, and for corrosion resistant metal applications. The level of consumption for these applications is expected to be maintained, however it is the increase in consumption driven by the battery industry, anticipated to rise from approximately 53,000t in 2015 to 120,000t by 2025 (Mitchell 2017), that is driving growth.

At present much of the world's cobalt is sourced from the Democratic Republic of Congo.

ENDS



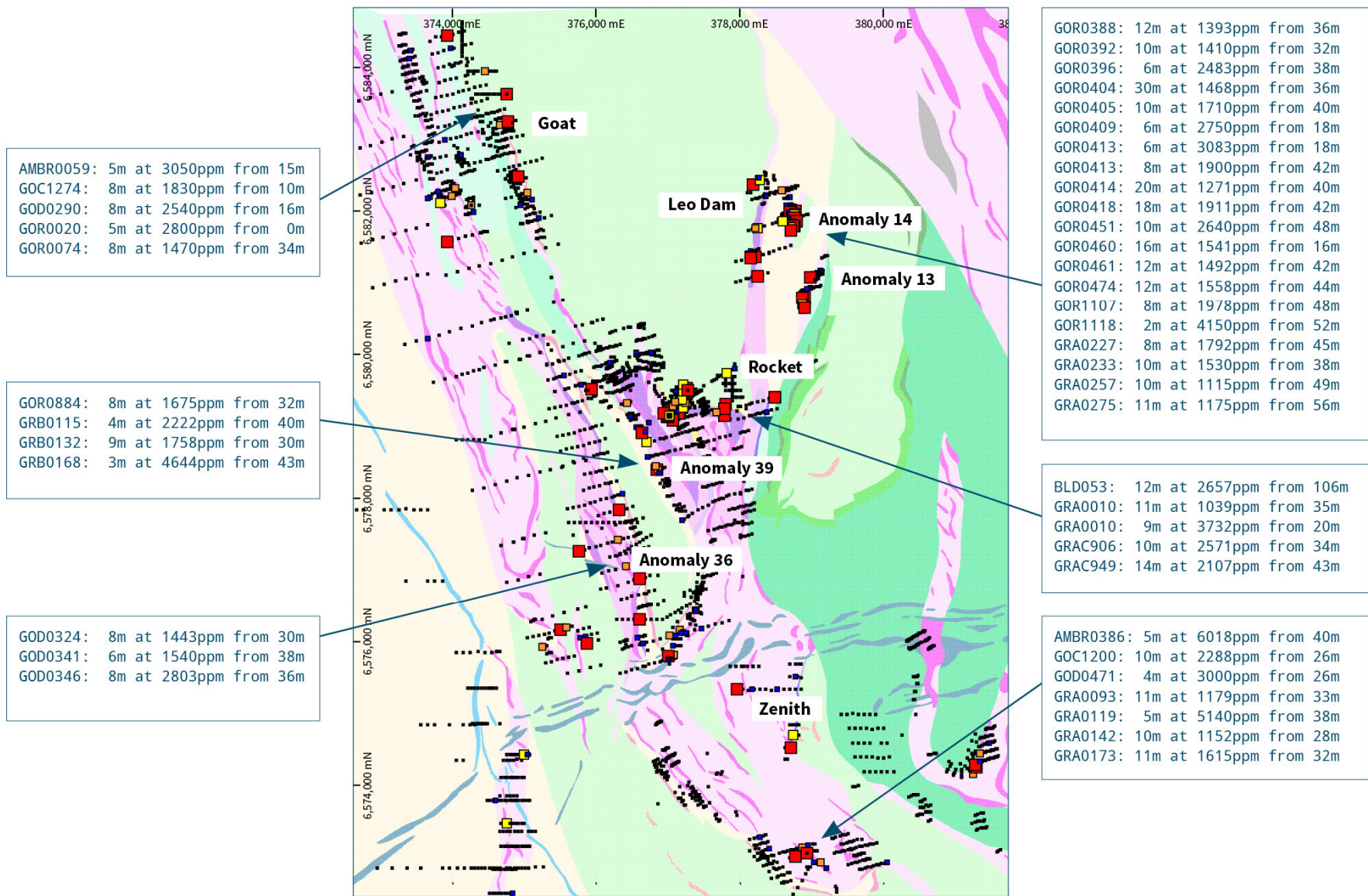
**Managing Director**  
**Pioneer Resources Limited**



**Photograph 1.** Pioneer's first cobalt-focussed hole, GRRC008, is underway.



**Photograph 2.** Weathered ultramafic rocks from GRRC008.



**Figure 2:** Golden Ridge Project Prospect Map showing a summary of cobalt results from drill holes completed between 1978 and 2015 (GRA and GRB holes were drilled by Pioneer).

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## About Pioneer Resources Limited

The Company's strategy is to actively explore for key, global demand-driven commodities in highly prospective geological domains, in areas with low geopolitical risk and with established infrastructure.

The Company's portfolio includes high quality alkali metal assets in Canada and WA, plus a strategically located gold joint venture and nickel projects in mining regions of Western Australia.

The Company's priority remains the exploration and development of its 100%-owned Pioneer Dome Project in the Eastern Goldfields of Western Australia, including the Sinclair Caesium Zone Pollucite Deposit, where the development and mining plans remains largely on schedule. The Company's ongoing field programmes also generated a number of exciting new lithium-caesium-tantalum drill targets, and drill testing is in progress.

An assessment of the potential for sediment/conglomerate-hosted gold at the 100%-owned Kangan Project, in the very topical west Pilbara gold region, was also initiated, and based on the positive findings will be followed up with further field work in the current quarter.

Planning for the next round of drilling at the Mavis Lake Lithium Project in Ontario, Canada, is also in progress.

## References

Blair Dome: Refer Company's announcements to ASX dated 18 November 2013 (Blair Resource Estimate), May 2014, 27 January 2015, 18 May 2015, 20 July 2015, 13 April 2017.

The Alchemist Issue 31, a report from RFC Ambrian, July 2017.

Cobalt report and Battery Materials Fund Presentation, Robert D. Mitchell, Managing Member Portal Capital, LLC, General Partner for the Green Energy Metals Funds & Odysseus Funds, March 2017.

Plus Company quarterly reports.

The Company it is not aware of any new information or data that materially affects the information included in this Report

## Glossary

For descriptions of any technical terms that are not described within the report, the reader is directed to various internet sources such as Wikipedia ([www.wikipedia.org](http://www.wikipedia.org)) or Mindat ([www.mindat.org](http://www.mindat.org))

## Competent Person

*The information in this report that relates to Exploration Results is based on information supplied to and compiled by Mr David Crook. Mr Crook is a full time employee of Pioneer Resources Limited. Mr Crook is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and has sufficient experience which is relevant to the exploration processes undertaken to qualify as a Competent Person as defined in the 2012 Editions of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.*

*Mr Crook gives consent to the inclusion of the matters presented in the announcement in the form and context in which they appear.*

### **Caution Regarding Forward Looking Information**

*This document contains certain statements that may be deemed "forward-looking statements." All statements in this announcement, other than statements of historical facts, that address future market developments, government actions and events, are forward-looking statements.*

*Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.*

*Forward looking statements in this document are based generally on the Company's beliefs, opinions and estimates as of the dates the forward looking statements that are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.*

*Although Pioneer believes the outcomes expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include new rare earth applications, the development of economic rare earth substitutes and general economic, market or business conditions.*

*While, Pioneer has made every reasonable effort to ensure the veracity of the information presented they cannot expressly guarantee the accuracy and reliability of the estimates, forecasts and conclusions contained herein. Accordingly, the statements in the presentation should be used for general guidance only.*